

REMARKS

This responds to the Office Action dated February 2, 2007.

Claims 1 and 11 are amended, and claims 7-9 and 17 are canceled. Claims 1-3, 6, 11-13, and 16 are now pending in this application.

§102 and §103 Rejection of the Claims

Claims 1-3, 6-9, 11-13, 16 and 17 were rejected under 35 U.S.C. § 102(e) as being anticipated by Casavant et al. (U.S. 2004/0088015). Claims 1-3, 5-13 and 15-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Scheiner et al. (U.S. Patent No. 6,415,183) in view of Min et al. (U.S. Patent No. 5,836,976). The rejections are traversed and reconsideration is respectfully requested.

With regard to the rejections of the previously pending claims as being anticipated by Casavant et al., Applicant reiterates the remarks made in response to the previous office action. The Examiner has taken the position that the apparatus of Casavant inherently detects respiratory activity in order to determine the rate and level of phrenic nerve stimulation, citing paragraphs 34, 73, and 74. The disclosure at paragraphs 34, 73, and 74, however, only relates to the timing and amplitude of the phrenic nerve stimulation pulses. Applicant has amended claims 1 and 11 herein to recite that the monitored respiratory activity is *spontaneous* respiratory activity. The apparatus of Casavant delivers phrenic nerve stimulation irrespective of any ongoing spontaneous respiratory activity and does not detect such activity. In the Office Action, the Examiner also argues that the Casavant does disclose detecting respiratory activity because, at step 280 of Fig. 7, the reference discloses detecting the oxygen saturation or pressure of the blood which may serve as an indicator of respiratory activity. While blood oxygen concentration may be reflective of respiratory activity under normal physiological circumstances, this is not the case when ventricular fibrillation is present. When ventricular fibrillation is present, the pumping action of the heart is so severely compromised that little or no blood flows through the pulmonary and systemic circulations, and respiratory activity thus has no effect upon blood oxygen concentration. Claims 1 and 11 both recite that respiratory activity is monitored during ventricular fibrillation.

Regarding the rejections of the previously pending claims under 35 U.S.C. § 103(a) as being unpatentable over Scheiner et al. (U.S. Patent No. 6,415,183) in view of Min et al. (U.S. Patent No. 5,836,976), or to any obviousness rejections that might be made based upon a combination of those references with Casavant, Applicant asserts that no combination of the teachings in those references would result in the elements recited by the pending claims as amended herein. While the Min reference appears to discuss delivery of diaphragmatic pacing while an output capacitor for delivering a defibrillation shock is charging, no discussion is found that relates to the delivery of diaphragmatic pacing during the ventricular refractory period after a ventricular sense if respiratory arrest is detected subsequent to termination of the ventricular fibrillation by the shock pulse. The Scheiner reference contains no discussion relating to the delivery of diaphragmatic pacing either while an output capacitor for delivering a defibrillation shock is charging or subsequent to delivery of such a shock. It is Applicant's position that the presently claimed subject matter is a solution to the problem of respiratory arrest complicating the treatment of ventricular fibrillation by an implantable cardioverter/defibrillator. In particular, the claimed subject matter is a solution to the problem of respiratory arrest following successful termination of ventricular fibrillation causing recurrence of the ventricular fibrillation. Applicant can find nothing in the cited references that would teach or suggest the claimed subject matter or even indicate an awareness of the problem. Applicant respectfully submits that claims 1-3, 6, 11-13, and 16 are neither taught nor made obvious by the teachings of the prior art of record.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (847) 432-7302 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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By his Representatives,

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Date June 4, 2007

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 4 day of June 2007.

Name

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